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# A New Species of *Tulipa* (Liliaceae) from Western Iran

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**ABSTRACT.** A new species, *Tulipa faribae* Ghahreman, Attar & Ghahremani-Nejad (Liliaceae), endemic to the Zagros Mountains of Kermanshah province, Iran, is described and illustrated. It is placed in the subgenus *Leiostemones* Boissier due to its lack of trichomes on the filaments and on the base of the tepals, and it appears to be most closely related to *T. schrenkii* Regel, due to its large bulb size, a papery tunic lined inside with some silky appressed hairs, and tepals usually scarlet with a black blotch margined with yellow. The new species differs in having flatter leaf margins, a more robust stem (to 8 mm in diameter), and larger perianth parts (tepals to 100 mm long).

**Key words:** Iran, Liliaceae, *Tulipa*, Zagros Mountains.

The genus *Tulipa* L. is a member of the Liliaceae family and is traditionally classified in the subfamily Lilioideae. This genus, with nearly 100 species, is distributed from Asia to North Africa (Mabberley, 1997) and contains 35 species in the Iranian Plateau (Iran, Afghanistan, western Pakistan, eastern Iraq, southern Azerbaijan, and southern Turkmenistan), 22 of which are found in Iran, including the new species (Rechinger et al., 1990).

Here we describe a new species in *Tulipa* from the Zagros Mountains in the Kermanshah province of Iran. It belongs to *Tulipa* subg. *Leiostemones* Boissier, which is characterized by a lack of hairs on all of the anther filaments and at the base of the tepals. The subgenus otherwise contains 27 species in five sections in the Iranian Plateau (Rechinger et al., 1990).

***Tulipa faribae*** Ghahreman, Attar & Ghahremani-Nejad, sp. nov. TYPE: Iran, Kermanshah: betw. Paveh & Javanrud (Zagros Mtns.), 1600 m, 15 May 1980, A. Ghahreman 29931 (holotype, TUH; isotypes, FAR, MO, TUH). Figure 1.

Planta 44–45 cm alta. Bulbus ovoideus, 6.5 cm longus, 2–4 cm crassus. Folia 3 ad 6, lanceolata, glabra. Flos unicus, magnus; tepala rubra, glabra, macula basali nigra. Filamenta nigra, 7–8 mm, glabra; antherae 16–20 mm; ovarium 30 mm longum, flavum, oblongum, glabrum; stylus brevissimus; capsula ignota.

Perennial plant, ca. 44–45 cm high, glabrous, robust, with stem 3–7(–8) mm diam. at lower portion; bulb 6.5 cm tall × 2–4 cm diam.; tunic papery, lined inside with some silky appressed hairs, pale brown, tomentose in upper portion internally. Leaves 3 to 6, lanceolate, glaucous, glabrous, smooth, erect, flat at the margin, attenuate toward apex, not exceeding the flowers; lower leaves up to 20 × 4.5 cm; upper leaves smaller, up to 16 × 1.5–2.5 cm. Flowers solitary, large; perianth segments red, glabrous and black-maculate in the lower third, margined with yellow; outer tepals 5.5–10 × 2–3 cm, broadly elliptic, attenuate toward base in claw, acuminate at the apex; inner tepals shorter, 5.5–7 × 1.5–2 cm, acute or rarely obtuse adaxially, attenuate toward the base in narrow claw; anther filaments black, 7–8 mm, glabrous; anthers olivaceous, 16–20 mm; ovary ca. 30 mm, yellow, oblong, glabrous; style very short (ca. 1 mm long). Fruit not seen.

**Phenology.** Flowering in May; fruiting most likely June to July.

**Etymology.** The specific epithet is in honor of the Iranian botanist, Fariba Ghahreman.

**Distribution.** *Tulipa faribae* is endemic to western Iran and known only from the type locality, with a population of 20 to 25 plants. It is an Irano-Turanian species and grows in a *Quercus* L. forest dominated by *Q. brantii* Lindley.

**Relationships.** The larger flowers of *Tulipa faribae* easily distinguish it from the other *Tulipa* species distributed in Iran. Morphologically, the closest relative of this species is *T. schrenkii* Regel, which is distributed in western Azarbaijan and Kurdistan provinces, Iran. These two species do not overlap



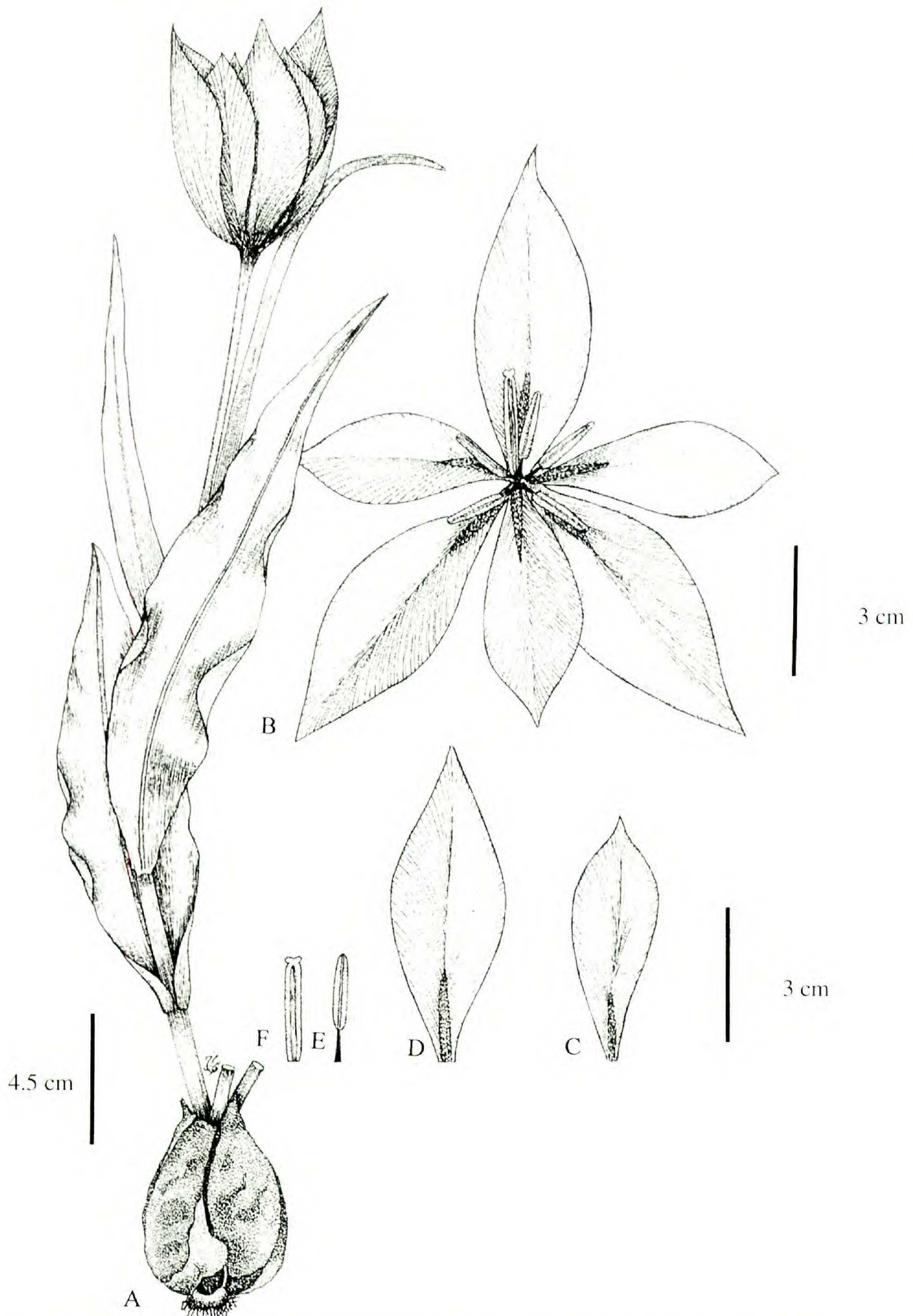


Figure 1. *Tulipa faribae* Ghahreman, Attar & Ghahremani-Nejad. —A. Habit. —B. Flower. —C. Inner tepal. —D. Outer tepal. —E. Stamen. —F. Gynoecium. Drawn from the holotype, A. Ghahreman 29931.

geographically, with *T. faribae* located at ca. 34°50", while *T. schrenkii* is only found as far south as ca. 36°40" (Rechinger et al., 1990). The new species (seven specimens were examined) differs from *T.*

*schrenkii* in the following: leaves 3 to 6 (vs. 3 to 4), flat at margin (vs. undulate), erect (vs. recurved); stem robust (3–7(–8) mm wide when dry vs. 3.5–4.5 mm); perianth 55–100 × 20–30 mm (vs. 23–58 ×



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9–27 mm); and anther length 16–20 (vs. 4–13) mm (Fig. 1).

The other Iranian species of *Tulipa* are distributed between 45 m (Gonbad-e-Kavus, Mazandaran province) and 3600 m (Shirkuh, Yazd province) above sea level, based on information from 257 *Tulipa* specimens from FAR, FUMH, and TUH herbaria. Four of the 22 species of *Tulipa* in Iran are endemic.

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